Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Kondo effects in a triangular triple quantum dot II: ground-state properties for deformed configurations AKIRA OGURI, Osaka City University, SHINICHI AMAHA, ICORP-JST, YUNORI NISIKAWA, Osaka City University, A.C. HEWSON, Imperial College, SEIGO TARUCHA, University of Tokyo, TAKAHIDE NUMATA, Osaka City University — We study transport through a triangular triple quantum dot (TTQD) connected to two noninteracting leads, using the numerical renormalization group. The system has been theoretically revealed to show a variety of Kondo effects depending on the electron filling of the triangle [1]. For instance, the SU(4) Kondo effect takes place at three-electron filling, and a two-stage Kondo screening of a high-spin $S = 1$ Nagaoka state takes place at four-electron filling. Because of the enhanced freedom in the configurations, however, the large parameter space of the TTQD still has not been fully explored, especially for large deformations. We report the effects of the inhomogeneity in the inter-dot couplings and the level positions in a wide region of the filling. [1] T. Numata, Y. Nisikawa, A. Oguri, and A. C. Hewson: PRB **80**, 155330 (2009).

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Date submitted: 04 Jan 2010 Electronic form version 1.4